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ABSTRACT

The paper reports on a national survey which included data on handicapped students in U.S. high schools, as part of a longitudinal study of 58,270 high school students. Findings are described from student self reports and teacher checklists on the existence of specific conditions (for students, learning disability, hearing impairment, speech disability, orthopedic handicap or other health impairment; and for teachers, physical or emotional handicap). Results are discussed regarding the prevalence of handicaps (teachers were more likely to identify students as handicapped than were students to report themselves); sexual, racial, and socioeconomic characteristics of handicapped students; and agreement among the handicap indicators. Observations made from the data included that only a portion of the students who reported a handicap had participated in special education programs; that a larger percentage reported a specific disability than claimed a physical limitation; and that handicap indicators identified similar groups of students although they seldom identified the same individuals. (CL)

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Defining, Counting, and Characterizing Handicapped Students in the Nation's High Schools

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Introduction

One of the problems educators have when trying to serve handicapped students is knowing how many there are. Various national surveys differ on the count, sometimes by as many as a million students. They also differ in their purposes, operational definitions and reporting units surveyed, which probably accounts for the disparity in the numbers they produce.

A national survey by the National Center for Education Statistics was recently begun which provides an independent estimate at the high school level. This survey, the High School and Beyond study of 1980 sophomores and seniors, collects data on the handicapped as part of a general statistical reporting function. The base-year survey of 1980 from which this analysis will be drawn is part of a large-scale longitudinal study of public and private students in the Nation's secondary schools. The national scope and large size of the sample (over 58,000 respondents) can accommodate analysis on a relatively small population group such as the handicapped at the secondary school level. The High School and Beyond Study is also unique in that it can estimate the prevalence of the handicapped

population and characterize it based on both student and teacher responses. The student reports alone provide indicators of handicapping conditions, perceived limitations, and participation in special education programs.

These alternate items from the student reports, along with the teacher assessments, furnish separate national estimates of the prevalence of handicapping conditions at the high school level. They also offer a description of students who consider themselves handicapped or who are defined by their teachers as handicapped. Background characteristics such as sex, racial/ethnic membership, socioeconomic status, and academic ability are used to describe the handicapped as they compare to the total student population. The distributions of handicapped students in various curricular programs and in public or private schools yield further information on how and where the handicapped are being educated. The agreement between self-reports and teachers' assessments also is examined by merging student responses with teacher responses. The following presentation provides the estimates from each of the items, describes the most salient characteristics of students using these various indicators, and suggests the extent to which they identify the same students.

Methodology

Sampling

Conducted for NCES by the National Opinion Research Center at the University of Chicago, the High School and Beyond study was designed to be representative of the Nation's secondary schools and students. The study sample consisted of 1,015 schools and included public, alternative, private, and Catholic schools.

In the two-stage stratified probability sample, schools were drawn proportional to size, and 36 sophomores 36 seniors were drawn randomly from each selected school. Substitutions were made for noncooperating schools in those strata where possible. Refusals, absences, and parental refusals at the student stage resulted in an 84 percent completion rate for students. The total number of students participating in the base-year survey was 58,270.

Questionnaire Items

Information of several sorts was obtained in the survey. Students spent about an hour completing questionnaires and then took a battery of tests with a total testing time of about one and one-half hours. School officials completed questionnaires covering items of information about the schools. Finally, teachers completed checklists concerning students in the sample whom they had had in class to provide information beyond the students' own reports about themselves.

The item wording on the handicapped questions was the same on both the sophomore and senior questionnaires but different from the teacher assessment. Self-reported program participation was defined by affirmative responses to having been enrolled while in high school in either a "special program for the educationally handicapped" or a "special program for the physically handicapped." About three-fourths of the students who indicated that they participated in one type of program also responded that they participated in the other, suggesting that responses could logically be collapsed into a special education program indicator. This program item, along with the specific handicap item, were 'critical items'. That is, responses to these items were immediately checked for blanks and students were requested to complete them.

On the specific handicap item, students were asked whether they had any of the following conditions:

a. specific learning disability

b. visual handicap

c. hard of hearing

d. deafness

e. speech disability

f. orthopedic handicap

g. other health impairment

The visual handicap responses were not included in the total for this item because it was thought that students whose vision was corrected by lenses had included themselves in this category. Inclusion of these responses would have distorted the total inordinately. An alternate method would be to include those among the visually handicapped who also indicated a limiting physical condition. The problem here was that for an undetermined number, impaired vision might not be, per se, the limiting physical condition.

The limiting physical condition item immediately followed the specific handicap item, which may have contributed to some consistency in response. A look at the findings would suggest, however, that this effect was negligible. The specific wording of the item was: "Do you feel that you have a physical condition that limits the kind or amount of work you can do on a job, or affects your chances for more education?" This item rather clearly was attempting to measure the severity of the handicap as perceived by the student. As the data may suggest, students in this category either had the most debilitating conditions or at least perceived themselves as disabled by their handicap.

Teacher evaluations were available for 18,231 sophomores and 17,056 seniors. Teachers were asked whether they had had the sampled student in class that school year and, if so, their impressions of the student on a few items. Students with teacher assessments had an average of four teacher comment forms attached to their files. The handicapped item was worded as follows: "Whether this student in your opinion has or may have a physical or emotional handicap that is affecting his or her school work?". Teachers were asked for their opinions and were requested to avoid consulting school records. It should also be noted that teachers were asked about emotional handicaps but that students were not. To be evaluated as handicapped a student needed to be judged so by only one teacher. An alternate definition might require that a certain proportion of the teachers had to assess the student as handicapped.

Findings

Estimates of Handicapped Students

Students were least likely to report participation in special education programs, among all the handicap indicators. Only 4 percent of sophomores and 5 percent of seniors indicated that they had ever taken such courses or programs in high school (table 1 and 2). Students were also less likely to report a limiting physical condition; 8 and 6 percent of sophomores and seniors, respectively, figured in this estimate. As to a specific handicap, 14 percent of sophomores and 10 percent of seniors responded that they had one or more of the impairments listed. However, on the list of handicaps, most often checked was the 'other health impaired' category, indicating that the question failed to distinguish an important category. From the teacher assessments, it was apparent that teachers were more likely to

evaluate students as handicapped than were students to report themselves. About 24 percent of sophomores and 19 percent of seniors were classified as physically or emotionally impaired by at least one of their teachers (table 3).

Students who fit any of the self-reported measures totalled 21 percent of the sophomore class and 16 percent of the senior class (tables 1 and 2). When the student reports were merged with the teacher assessments, about 38 percent of sophomores and 31 percent of seniors would be classified as handicapped under at least one definition (table 4).

Characteristics of Handicapped Students

On all measures, certain background characteristics predominated. Higher percentages of handicapped were reported by males, non-Asian minorities, students of low socioeconomic status and low ability students (tables 1 and 2). Teachers also tended to identify these types of students more often as physically or emotionally impaired (table 3). Such generalizations appeared to be more true of the sophomore class than of the senior class.

Male students tended to have higher handicapped estimates than their female classmates, regardless of the definition used.

Black, Hispanic, and American Indian students figured disproportionately among the handicapped as defined by themselves or by their teachers. Asian Americans had higher estimates than whites on the self-reported items but lower estimates on the teacher reports. Among the sophomores, blacks comprised 14 percent of the total sample but 19 percent of the self-reported handicapped, and Hispanics

8 and 11 percent respectively. American Indian students in the sophomore class had the highest prevalence of the handicapped; 38 percent identified themselves as handicapped under one or more definitions and 37 percent were evaluated as such by teachers. The differences among racial/ethnic groups in the senior class were somewhat smaller but were nonetheless statistically significant on almost all measures.

Socioeconomic status (SES) further differentiated the handicapped from the total student body. Students in the lowest third of their class on the socioeconomic composite scores were the most likely to perceive themselves or be evaluated as handicapped. Among low SES sophomores, 26 percent reported themselves as handicapped on any student-identified item and 29 percent were so evaluated by teachers. Among low SES seniors, 20 percent were self-reported handicapped and 21 percent were identified as impaired by teachers. On most measures, smaller rates were reported for the upper SES group than for the middle SES group.

Handicapped students were also disproportionately represented in the lowest ability quartile. Moving from low to average and from average to high ability, rates declined significantly on most indicators. Students in the lowest quartile were two to three times as likely as students in the highest quartile to identify themselves or be evaluated by teachers as handicapped. Among low ability sophomores, one-third identified themselves as handicapped and 39 percent were evaluated by their teachers as impaired. About one-fourth of low ability seniors were so defined by their self-reports and teacher assessments.

Handicapped rates differed further by type of curriculum program in which the students were enrolled, whether academic (college preparatory), general, or vocational. Handicapped rates from almost all indicators were highest among vocational students. Estimates were usually lowest among the academic program students, except on the self-reported limiting physical condition item on which estimates were significantly higher than for students in general programs. Sophomores evaluated as handicapped by teachers comprised 16 percent of academic students but 27 and 31 percent respectively of general education and vocational students. Seniors so evaluated represented 15 percent of academic students, 22 percent of general education students, and 21 percent of vocational students.

The lower academic orientation of handicapped students is further revealed in their lower postsecondary educational expectations. Sophomores who identified themselves as handicapped on one or more items comprised 38 percent of students who did not expect to complete high school compared to about 17 percent of those who intended to complete 4 or more years of college. Seniors with at least one self-reported handicap item represented 42 percent of those who did not expect to graduate but only 13 percent of those planning on a college degree.

The proportion of handicapped students estimated to be in the public schools was higher on most measures than those reported for either Catholic or other private schools. No consistent pattern was apparent in the differences shown between Catholic and other private schools.

Agreement Among the Handicap Indicators

By merging the responses on the student self-reports with the teacher assessments, it was possible to examine the extent to which the various handicap

indicators identified the same students. Perfect agreement was not expected, given the large differences in the handicapped counts developed from the alternate indicators. Also, different wording on the student and teacher reports would inevitably result in data incongruities. Students and teachers further might not be expected to perceive handicapping conditions from the same perspective. However, since the indicators identified similar student groups (characterized by being predominately male, disproportionately minority, and of low socioeconomic status and ability,) it might reasonably be assumed that the indicators had identified the same individuals.

When the student files were merged with their teachers' reports, unduplicated counts for the handicapped as defined by every measure were produced. The results found 38 percent of sophomores, and 31 percent of seniors defined as handicapped by one or more measures, the most liberal definition of handicapped. Only 0.2 percent of the sophomore or senior classes were defined as handicapped by all four measures, the most conservative definition (table 5). Among handicapped students defined by one or more measures, the largest group comprised those who had been evaluated by teachers as handicapped but had not identified themselves as having a specific handicap, limiting physical condition, or having participated in a special education program. They comprised 17 percent of the total sophomore class and 14 percent of the total senior class and about 45 percent of the handicapped defined by any measure. The next largest group was the 6 percent of sophomores and 5 percent of seniors who indicated a specific handicap but did not appear on any other indicator of the handicapped. These were followed, in order of descending prevalence, by the small proportions of students with physical limitations but no other

handicapped indicator, and by students with specific handicaps who were also evaluated as such by teachers. Other combinations each comprised about 1 percent or less of the sophomore and senior classes.

Given the lack of agreement found between student and teacher reports, item agreement was also examined within the student reports for the entire samples. Again, the largest percentages were registered by students defined by a single item rather than by items in combination. Those with specific handicaps comprised the largest group, followed by those with limiting physical conditions and by program participants (table 6). The only combination to figure minimally in the total sample was the group of students who indicated both a specific handicap and a limiting physical condition. This group represented only about 2 percent of all sophomores and seniors and about 13 percent of those students who defined themselves as handicapped on one or more measures.

Interpretation

The alternate and inconsistent counts derived from the various handicap indicators demand interpretation that will require further analysis of the data beyond these crosstabulations. Some general observations can, however, be made based on the present findings.

Upon comparison, the handicapped estimates derived from the student questionnaire showed that only a portion of students who indicated they had a handicap had participated in special education programs. One possible explanation was that

these students, although handicapped, did not, in fact, require a special program. This, however, might be less true of students who indicated a limiting physical condition which impaired their educational development.

Comparing the counts also shows that a greater proportion of students indicated a specific handicap than responded that they were impaired by a physical limitation. This suggests, perhaps, that some handicapping conditions were not perceived by these students as debilitating. In addition, some conditions such as a specific learning disability might not be physically manifest.

The higher handicapped counts derived from the teachers' assessments may be partially attributable to the inclusion of the emotionally impaired in the teacher item. Behavioral problems are not only likely to impair the individual student's educational progress, but also to be disruptive to the rest of the class. It can be posited that behavioral problems may be as likely as physical handicaps to come to the attention of the teacher.

On all counts, sophomores outnumbered seniors, suggesting that a disproportionately high percentage of handicapped students drop out between the 10th and 12th grades. An examination of the background characteristics of handicapped students appears to support this contention, in that these same characteristics typify high school dropouts. Males, non-Asian minorities, low SES and low ability students had higher percentages who identified themselves or were evaluated by teachers as handicapped. Also, much larger proportions of the handicapped figured among those students who did not expect to graduate from high school than among those with higher educational expectations.

Finally, although the handicap indicators identified similar groups of students, they seldom identified the same individuals. Perfect agreement among items was not anticipated, given the different wording used and the different concepts measured. Yet, the extent of the disagreement among items was rather revealing, suggesting that even on the same survey, counts of the handicapped can vary considerably, depending on the definitions employed and the type of respondents questioned.

Table 1
Percent of secondary school sophomores reporting participation in special education programs, limiting physical condition, or specific handicap, by background characteristics: Spring 1980

Characteristic	Program participation	Limiting physical condition	Specific handicap	Any self-reported handicap item	Sample size
			Percent		
All students	4.4	8.2	13.8	20.9	27,831
Sex:					
Male	4.8	9.0	14.5	22.3	12,909
Female	3.9	7.3	12.9	19.7	14,185
Racial/ethnic group:					
White	3.9	6.8	12.1	18.4	19,787
Black	5.7	12.7	18.7	28.8	3,658
Hispanic	6.3	12.7	18.7	28.8	3,225
American Indian	9.7	15.1	28.2	38.2	246
Asian/Pacific Islander	4.6	12.5	17.3	25.7	308
SES composite:					
Low	5.2	10.9	17.9	26.0	7,636
Middle	4.2	7.2	12.7	19.5	12,808
High	3.6	6.0	11.3	17.2	6,493
Ability:					
1 Lowest	7.7	14.8	23.2	33.1	6,229
2	4.0	7.5	12.4	19.5	6,401
3	2.9	5.4	9.9	15.7	6,354
4 Highest	2.3	4.6	8.6	13.6	6,614
School control:					
Public	4.6	8.5	14.1	21.3	24,273
Catholic	2.3	5.4	9.9	15.5	2,643
Other private	4.0	5.7	13.6	19.1	915
School program:					
Academic	3.3	7.9	10.6	16.6	9,711
General	4.3	5.7	13.8	20.7	9,486
Vocational	6.1	12.2	18.4	27.4	5,407
Educational expectations:					
Less than high school	8.8	17.1	26.8	37.6	448
High school only	5.5	10.9	17.2	25.5	6,339
Vocational training	4.7	8.7	14.3	21.7	4,479
Less than 2 years college	5.9	9.9	17.4	25.4	833
More than 2 years but less than 4 years college	3.4	6.0	11.6	17.8	3,322
4 or more years college	3.3	5.9	10.9	16.8	11,496

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations.

Table 2
Percent of secondary school seniors reporting participation in special education program, limiting physical condition, or specific handicap, by background characteristics: Spring 1980

Characteristic	Program participation	Limiting physical condition	Specific handicap	Any self-reported handicap item	Sample size
			Percent		
All students	1/4.8	5.9	9.8	16.3	26,946
Sex:					
Male	4.6	6.3	10.5	16.8	12,533
Female	4.5	5.4	8.9	15.5	13,814
Racial/ethnic group:					
White	4.2	5.1	8.9	14.7	19,320
Black	6.1	8.5	12.6	21.6	3,525
Hispanic	6.8	8.7	13.1	22.2	3,011
American Indian	8.4	14.0	19.2	27.6	201
Asian/Pacific Islander	7.8	8.9	15.3	22.4	355
SES composite:					
Low	6.0	7.9	12.4	20.4	8,031
Middle	4.3	5.5	9.4	15.5	12,381
High	4.1	4.0	7.3	12.7	6,000
Ability:					
1 Lowest	7.9	10.1	14.4	24.6	6,470
2	3.9	5.7	9.5	15.3	6,063
3	3.6	4.4	8.0	13.4	5,803
4 Highest	2.5	3.2	6.4	10.4	5,754
School control:					
Public	4.8	6.1	10.0	16.6	23,510
Catholic	4.6	4.0	6.9	13.5	2,584
Other private	3.8	3.3	8.7	13.8	852
School program:					
Academic	3.5	6.8	10.9	12.5	9,778
General	5.6	4.2	7.2	18.2	10,039
Vocational	5.5	7.0	11.8	18.9	6,538
Educational expectations:					
Less than high school	18.7	20.4	25.3	42.3	127
High school only	6.0	8.9	13.4	21.6	4,939
Vocational training	5.3	6.5	10.8	17.9	5,060
Less than 2 years college	6.3	8.5	12.5	19.6	744
More than 2 years but less than 4 years college	4.2	4.9	9.0	14.9	3,275
4 or more years college	3.8	4.0	7.6	12.9	12,241

1/ Figure higher than that reported for either sex because includes nonrespondents on sex item. Of those students, 17 percent reported being in a special program, raising the estimate for the total higher than for both sexes.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations.

Table 3
Percent of secondary school sophomores and seniors assessed by teachers as physically or emotionally impaired, by background characteristics: Spring 1980

Characteristic	Sophomores		Seniors	
	Percent	Sample size	Percent	Sample size
All students	24.4	18,231	19.0	17,056
Sex:				
Male	26.2	8,048	19.8	7,759
Female	21.3	9,000	17.9	8,603
Racial/ethnic group:				
White	23.2	13,384	18.0	12,680
Black	28.8	2,299	22.5	2,181
Hispanic	24.2	1,678	20.2	1,448
American Indian	36.7	139	25.5	98
Asian/Pacific Islander	15.0	194	15.4	208
SES composite:				
Low	29.3	4,803	20.7	4,857
Middle	23.2	8,479	18.3	7,943
High	18.6	4,174	17.1	3,816
Ability:				
1 Lowest	38.6	4,198	26.0	4,122
2	25.0	4,346	19.8	3,874
3	18.9	4,211	15.0	3,735
4 Highest	13.7	4,380	12.7	3,782
School control:				
Public	25.0	15,893	19.2	14,819
Catholic	20.3	1,673	20.4	1,625
Other private	20.3	665	13.3	612
School program:				
Academic	16.4	6,178	15.0	6,521
General	27.3	8,101	22.0	6,198
Vocational	30.9	3,571	20.9	4,088
Educational expectations:				
Less than high school	55.9	286	48.1	79
High school only	33.9	4,281	25.6	3,195
Vocational training	25.8	2,949	20.3	3,221
Less than 2 years college	28.5	519	21.9	474
More than 2 years but less than 4 years college	19.8	2,208	17.2	2,067
4 or more years college	16.7	7,283	15.1	7,586

NOTE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations.

Table 4
Percent of secondary school sophomores and seniors reporting any handicap item or assessed by teachers as physically or emotionally impaired: Spring 1980

Characteristic	Sophomores		Seniors	
	Percent	Sample size	Percent	Sample size
All students	37.6	18,231	30.7	17,056
Sex:				
Male	39.8	8,048	31.7	7,759
Female	34.3	9,000	29.4	8,603
Racial/ethnic group:				
White	35.1	13,384	28.5	12,680
Black	45.3	2,299	38.6	2,181
Hispanic	42.7	1,678	34.9	1,448
American Indian	57.6	139	45.9	98
Asian/Pacific Islander	34.5	194	30.8	208
SES composite:				
Low	45.4	4,803	34.5	4,857
Middle	35.2	8,479	29.6	7,943
High	31.0	4,174	26.8	3,816
Ability:				
1 Lowest	55.8	4,198	42.4	4,122
2	37.8	4,346	31.0	3,874
3	30.6	4,211	25.0	3,735
4 Highest	24.8	4,380	21.9	3,782
School control:				
Public	38.4	15,893	31.0	14,819
Catholic	32.2	1,673	30.8	1,625
Other private	31.0	665	24.0	612
School program:				
Academic	28.4	6,178	25.1	6,521
General	40.3	8,101	34.3	6,198
Vocational	46.3	3,571	34.3	4,088
Educational expectations:				
Less than high school	69.2	286	69.6	79
High school only	48.7	4,281	39.4	3,195
Vocational training	38.7	2,949	32.8	3,221
Less than 2 years college	43.7	519	35.0	474
More than 2 years but less than 4 years college	32.1	2,208	27.9	2,067
4 or more years college	29.1	7,283	25.7	7,586

NOTE: Figures are for 18,231 sophomores and 17,056 seniors for whom teachers' assessments were available.

NOTE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations.

Table 5
Percentage distribution of secondary school sophomores and seniors by various combinations of responses to the self-reported handicap items and the teacher assessment item

Program participation	Limiting physical condition	Specific handicap	Teacher assessment		Sophomores	Seniors
					Percentage distribution	
Total students				....	100.0	100.0
No handicap items				....	62.4	69.3
X	-	-	-	....	1.7	2.7
-	X	-	-	....	2.9	2.3
X	X	-	-	....	.1	.2
-	-	X	-	....	6.4	4.7
X	-	X	-	....	.4	.2
-	X	X	-	....	1.5	1.4
X	X	X	-	....	.2	.1
-	-	-	X	....	17.1	14.1
X	-	-	X	....	.8	.8
-	X	-	X	....	1.2	.8
X	X	-	X	....	.1	.1
-	-	X	X	....	3.2	1.9
X	-	X	X	....	.5	.3
-	X	X	X	....	1.2	.8
All four handicap items				....	.2	.2

X = Affirmative response.

NOTE: Figures are for 18,231 sophomores and 17,056 seniors for whom teachers' assessments were available and may differ slightly from those reported for the entire sample.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations.

Table 6
Percentage distribution of secondary school sophomores and seniors by various combinations of responses to the self-reported handicap items

Program participation	Limiting physical condition	Specific handicap	Sophomores	Seniors
			Percentage distribution	
Total students		.....	100.0	100.0
No handicap items		.....	79.1	83.3
X	-	-	2.6	3.5
-	X	-	4.3	3.2
X	X	-	.3	.2
-	-	X	9.8	6.7
X	-	X	.9	.7
-	X	X	2.7	2.1
All three handicap items		.....	.4	.4

X = Affirmative response.

SOURCE: U.S. Department of Education, National Center for Education Statistics, High School and Beyond Study, unpublished tabulations.

Technical Appendix

For purposes of the crosstabulations that were produced for this paper, four separate definitions were used to classify students as being handicapped. Three of these measures were developed using student responses (BB011H, BB011I, BB087A, BB087C, BB087D, BB087E, BB087F, BB087G, and BB088) and one using teacher opinions (TCF10). On any of these four measures a student (sophomore or senior) was classified as being: 1-Handicapped; 0-Not Handicapped; or 99-missing. In analyses where definitions were combined, a student was classified as handicapped if he/she fit any one of the measure used. Separate analyses were performed for sophomore and senior cohorts using the same dependent and independent measures. For all analyses, the data were weighted to reflect national totals. The actual sample sizes, though, were retained for the computation of standard errors for significance testing. The variables used in this study for crosstab purposes were: Race/ethnic group, socioeconomic status composite, sex, high school program, achievement composite, type of school attended, and education expected. For purposes of this study, dependent and independent variables were coded as follows:

Racial/ethnic group - Coded so that: 1 = White (non-Hispanic); 2 = Hispanic (BB090 = 1, 2, 3, or 4); 3 = Black (non-Hispanic); 4 = Indian (non-Hispanic); and Asian (non-Hispanic). (BB089, BB090)

Socioeconomic status composite (SES) - a standardized equally weighted linear composite of father's education, mother's education, father's occupation, family income, and household items. (BB038, BB039, BB042, BB101, and BB104b-BB104i; BBSES)

Sex - Recoded so that 1 = Female and 0 = male. (BB083)

High school program - Recoded so that 1 = Academic, 2 = General, and 3 = Vocational. (BB002)

Achievement composite quartiles- Average of seven tests (sophomore) and five tests (senior), each standardized with a mean of 50 and standard deviation of 10. (YBVOCBSD, YBREADSD, YBMTHISD, YBMTH2SD, YBSCINSD, YBWRITSD, YBCIVCSD, FBUOCISD, EBUOC2SD, EBREADSD, EBMTHISD, EBMTH2SD - YB = Sophomore items; EB = senior items)

Education expected - Recoded so that 1 = Less than high school, 2 = High school only, 3 = Vocational training, 4 = Less than two years of college, 5 = more than 2 years and less than four years of college, and 6 = Greater than or equal to 4 years of college. (BB065)

School type -Recoded so that 1 = Public schools, 2 = Catholic schools, and 3 = other private schools. (SCHLTYPE)

Types of Handicaps

Program - Student indicated having participated in programs for educationally handicapped or physically handicapped. (BB011H, BB011I)

Specific -Student indicated any of the following conditions: Specific learning disability, hard of hearing, deafness, speech disability,

orthopedic handicap, or "other health impairment". (BB087A, BB087C. BB087D, BB087F, BB087G)

Limitation -Student indicated having a physical limitation that limits the kind or amount of work or education that can be attained. (BB088)

Teacher - At least one teacher indicated that student may have a physical or emotional handicap that is affecting his or her work (TCF10).

Combined Student - Student indicated having at least one of the above three student handicaps (program, specific, or limitation)

Combined Teacher - Student indicated having a handicap or teacher indicated. (Program, specific, limitation, or teacher)